

THE JOHNS HOPKINS UNIVERSITY

SCHOOL OF HYGIENE AND PUBLIC HEALTH

615 North Wolfe Street • Baltimore, Maryland 21205

DEPARTMENT OF EPIDEMIOLOGY

December 27, 1974

Dr. Aaron Shatkin
Roche Institute of Molecular
Biology
Nutley, NJ 07110

Dear Aaron:

I am now writing in response to your request for a comment on the current self-imposed moratorium on certain aspects of research with recombinant DNA molecules. Rather than attempting a frontal reply to your question, let me make several comments relevant to the problem.

(1) Your letter of November 11 and the four points included, are well summarized. I agree with all of these, and will not attempt to reiterate your statement.

(2) With respect to viral nucleic acids, it is my general feeling that the danger of a portion of the nucleic acid of a particular virus is not clearly greater than the danger of the whole nucleic acid packaged into the naturally occurring virus. I realize that one could take exceptions to this by invoking certain examples such as inactivated herpes viruses. Nevertheless, I would tend to the pragmatic view that biohazard standards that apply to use of infectious virus should be adequate for recombinant viral DNAs.

Let me put it this way: is it reasonable to propose one standard for the use of hybrid DNA containing (let us say) the transforming gene(s) of SV40 or HSV-2, and a less rigorous standard for use of intact SV40 or HSV-2 which also contain the same DNA sequences? Or are human papovaviruses, such as JC or BK, less dangerous than a nondefective adeno-SV40 hybrid? Two standards would be hard to support scientifically and hard to implement administratively.

This line of argument leads me to the position that, for the time being, the standards applied to viral DNA in a hybrid should be similar to those applied to the parental virus.

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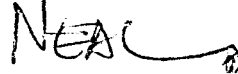
This is only a tentative suggested view, and I might shift if it was jammed down my throat (as well it might!). Having written this, I just received from Emmett Burkley a draft, dated 3 October 1974, of "Safety Standards for Research Involving Oncogenic Viruses." cursory review indicates that they (OBEC, NCI) classify both "nonhuman" oncogenic viruses like SV40 and recombinant DNAs as having "moderate risk." So I guess I am consistent with the tentative NCI guidelines.

This viewpoint has the attraction that it imposes restrictions on certain types of research with viral nucleic acids but not total abstinence.

I hope the foregoing is useful. Also I am sending a copy of a letter to Paul Berg, simply recording our phone conversation re: my attendance at Asilomar.

Best regards.

Cordially,

A handwritten signature in dark ink, appearing to read 'NEAL' followed by a stylized flourish.

Neal Nathanson, M.D.
Professor
(dictated but not read)

NN:nc

cc: ✓ Daniel Nathans
Keerti Shah